

Remarks

The Applicants have amended Claims 29, 39 and 40 to recite that the nonwoven fabric contains 0 to 10 wt% of an elastomer relative to the fibers or fiber material. Support may be found throughout the Applicants' Specification, such as paragraph [0043] on page 17. Entry into the official file is respectfully requested.

Claim 33 has been amended to recite that the composite fibers are islands-in-a-sea type composite fibers. Also, the Applicants have added the step of removing the sea component of the composite fibers to produce the ultra-fine fibers. Support for this amendment may be found throughout the Applicants' Specification, such as in various of the Examples, but particularly in paragraph [0021] on page 7 at lines 26 – 28. Entry into the official file is respectfully requested.

The Applicants have added a new title in accordance with the Examiner's helpful suggestion. Entry into the official file is respectfully requested.

Claims 29 – 36 and 38 – 46 stand rejected under 35 U.S.C. §103 over Mimura. The Applicants note with appreciation the Examiner's detailed comments hypothetically applying Mimura against those claims. The Applicants nonetheless respectfully submit that those claims are not obvious over Mimura. Reasons are set forth below.

Starting first with independent Claim 33, the Applicants respectfully submit that Mimura fails to disclose a process that is even close to the subject matter recited in Claim 33. In Claim 33, the method includes producing islands-in-a-sea type conjugate fibers by spinning. Then, the sea component is removed by a solvent. Hydro-entanglement is subsequently performed after forming the ultra-fine fibers by removal of the sea component. This is sharply contrasted to Mimura which produces bundles of ultra-fine fibers by a completely different method. In Mimura, splittable fibers are produced by spinning. Then, the splittable fibers are split into ultra-fine fibers by a water jet.

This is a completely different process because the ultra-fine fibers are formed in completely different ways. The Mimura conjugate fibers are formed into ultra-fine fibers by splitting. On the other hand, the ultra-fine fibers of Claim 33 are formed by dissolving the sea component out of conjugate fibers.

This means that the methodology of Mimura is completely different from that of Claim 33 and would lead one skilled in the art to a process completely different from what the Applicants employ in Claim 33. The Applicants therefore respectfully submit that Claim 33 is anything but obvious over Mimura.

There is an important consequence as the result of the differences in the methodology. In that regard, Mimura, because of the splittable fiber method used to split conjugate fibers into ultra-fine fibers inherently results in a "limited" conversion. This can be seen by reference to Examples 1 and 2 of Mimura wherein the conversion ratio is 95% or 96%, respectively. It is not substantially 100%. This is quite different from the Applicants' methodology which, because it uses a solvent to dissolve away the sea component, allows for substantially all of the ultra-fine fibers to be formed into single ultra-fine fibers such that substantially all of the ultra-fine fibers will entangle with each other. That is not the case in Mimura because of the incomplete conversion ratio of 95 to 96%. This inherently results in a different product.

In addition, in Claim 33, the method includes needle-punching islands-in-sea type composite fibers at a punching density of 500 needles/cm² or more. This process greatly contributes to strong entanglement of ultra-fine fibers. Specifically, the Applicants have observed differences between fiber fineness which is suitable for entanglement by needle-punching and fiber fineness which is suitable for entanglement by hydro-entanglement. Also, the Applicants found that a nonwoven fabric in which ultra-fine fibers are strongly entangled can be obtained by the method including first, needle-punching islands-in-sea type composite fibers at a high punching density, subsequently

converting the composite fibers into ultra-fine fibers, and further performing hydro-entanglement of the ultra-fine fibers.

On the other hand, although Mimura discloses needle-punching and water jet punching, the punching density of Mimura is no more than 77 needles/cm² as seen in Example 1. Such a needle-punching process is only for temporary binding of the fibers and does not achieve strong entanglement as in the Applicants' claimed subject matter.

This different product is reflected in Claims 29, 39 and 40 wherein at least substantially all of the ultra-fine fibers are entangled with each other. This inherently does not happen in Mimura because of the limited conversion ratio of 95 to 96%. Thus, the Applicants respectfully submit that Claims 29, 39 and 40 are not obvious over Mimura.

The Applicants have further amended Claims 29, 39 and 40 to recite that there is less than 10 wt% of elastomer contained within a nonwoven fabric. This is also a different approach from Mimura which discusses "impregnating" the obtained nonwoven fiber with an elastic polymer in various locations, such as in the text spanning Cols. 9 and 10. This impregnation step leads those skilled in the art to understand that a substantial quantity of elastic polymer should be employed. This can be confirmed in Examples 3 and 4 of Mimura wherein 23 wt% and 24 wt%, respectively, of polyurethane are utilized. This is far in excess of the amount of elastic polymer employed by the Applicants. In fact, the Applicants' artificial leather does contain a comparatively small amount of elastic polymer and can contain as little as no elastic polymer yet still retain all of the desired features. As such, the Applicants respectfully submit that Mimura leads those skilled in the art away from Claims 29, 39 and 40. Withdrawal of the rejection based on Mimura is respectfully requested.

Claim 37 stands rejected over the hypothetical combination of Honda with Mimura. The Applicants respectfully submit that even if one skilled in the art were to take the subject matter of

Honda and hypothetically combine it with Mimura, the resulting methodology would still be quite different from what the Applicants claim in Claim 37 inasmuch as the Applicants employ an islands-in-a-sea type composite fiber wherein the sea component is removed to produce the ultra-fine fibers. This is completely different from what is done by a combination of Honda with Mimura. Withdrawal of the rejection is respectfully requested.

Claims 47 and 48 stand rejected under 35 U.S.C. §103 over the combination of Katayama with Mimura.

The Applicants respectfully submit that hypothetically combining the subject matter of Katayama with Mimura would still fail to result in the subject matter of Claims 47 and 48 for the reasons set forth above with respect to Claim 40. Withdrawal of the rejection is respectfully requested.

Claims 40 and 42 – 48 stand provisionally rejected over Claim 1 of Yokoi. The Applicants respectfully submit that this rejection may be held in abeyance inasmuch as it is merely provisional.

In light of the foregoing, the Applicants respectfully submit that the entire application is now in condition for allowance, which is respectfully requested.

Respectfully submitted,



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